REMARKS

This Response is submitted in reply to the Final Office Action dated November 17, 2009 in conjunction with the enclosed Request for Continued Examination. Claims 1 to 7, 9 to 19, 21 to 31 and 33 to 35 are pending in the present application. Claims 12, 24 and 36 stand withdrawn. Claims 8, 20 and 32 stand withdrawn. Claims 1 to 7, 9 to 11, 13 to 19, 21 to 23, 25 to 31, 33 to 35 are hereby amended. No new matter has been added by such amendments. Claims 1, 13 and 25 are in independent form. A Supplemental Information Disclosure Statement is submitted with this Response. Please charge Deposit Account No. 02-1818 for all payments due in connection with this Response.

As noted above, Applicant has filed a Request for Continued Examination with this Response. Accordingly, Applicant requests that the Examiner provide an upcoming Office Action which will ". . . identify any claims which he or she judges, as presently recited, to be allowable and/or . . . suggest any way in which he or she considers that rejected claims may be amended to make them allowable" in accordance with §707.07(d) of the MPEP.

The Office Action rejected Claims 1 to 7, 9 to 11, 13 to 19, 21 to 23, 25 to 31 and 33 to 35 under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Application No. JP 10-021391 to Hiroyuki in view of Japanese Patent Publication No. 11-003421 to Masaaki et al. ("Masaaki") in further view of U.S. Patent Publication No. 2002/0090109 to Wendt ("Wendt"). Applicant respectfully disagrees with these rejections. Nonetheless, to better describe the invention, Applicant has made certain clarifying amendments.

Applicant notes that although the statement of rejection on page 2 of the Office Action includes the Wendt reference, the body of the Office Action does not appear to discuss any specific portion of the Wendt reference when addressing the claim elements.

Hiroyuki discloses a method and device for collating a picture. Paragraph [0001] of Hiroyuki discloses:

> This invention about the image collating method and device which perform image collation of the image comparison in which patterns such as a figure used as a standard were picturized and the inputted image in which the figure to be examined etc. were picturized Especially an inputted image rotates to an image comparison parallel translation is carried out and when zooming is being carried out the angle of rotation the amount of parallel translation and the rate of zooming to an image comparison of this inputted image are computed at high speed and it

is related with the image collating method and device which compare both images based on this computed result.

Paragraph [0010] of Hiroyuki discloses:

Then the angle of rotation psi of an inputted image [as opposed to an image comparison by main invention of this invention]. In an image collating method which computes the amount of parallel translation (xdeltaydelta) and the rate s of zooming respectively and was made to perform image collation of an image comparison and an inputted image based on this computed result. While performing theta-rho Hough transformation to a step which generates an edge direction picture about each of said image comparison and said inputted image and an edge direction picture about said image comparison and generating reference theta-rho plane data A step which performs theta-rho Hough transformation to an edge direction picture about said inputted image and generates input theta-rho plane data While carrying out the Fourier transform of the reference theta-rho plane data about said image comparison and generating reference theta-p plane data Each of a step which carries out the Fourier transform of the input theta-rho plane data about said inputted image and generates input theta-p plane datap axis of said input theta-p flat surface and p axis of said reference theta-p flat surface by carrying out logarithmic-coordinates conversion on q axis A step which generates the reference theta-q plane data concerned and input theta-q plane data so that an input theta-q flat surface may shift only quantity according to said rate s of zooming to q shaft orientations to a reference theta-q flat surface While computing a shift amount of theta shaft orientations of an input theta-q flat surface over a reference theta-q flat surface as said angle of rotation psi by comparing said reference theta-q plane data and input theta-q plane data and carrying out two-dimensional image matching processing A step which computes a shift amount of q shaft orientations of an input theta-q flat surface over a reference theta-q flat surface as said rate s of zooming A shift amount of theta shaft orientations of said input theta-rho flat surface and a rate of zooming of rho shaft orientations to said reference theta-rho flat surface are amended using said computed angle of rotation psi and the rate s of zooming In each theta of this amended reference theta-rho plane data and said input theta-rho plane datahe calculates a cross correlation function and is trying to have with a step which computes said amount of parallel translation (xdeltaydelta) by performing reverse Hough transformation.

Masaaki discloses a method for detecting a line segment. The Abstract of Masaaki discloses:

PROBLEM TO BE SOLVED: To reduce computer storage capacity also to shorten computer processing time and to reduce the effect of noise by calculating an edge point that is equal to or more than threshold from the intensity of a differential value of an edge point and acquiring an image data that has inclination direction components.

> SOLUTION: An edge image is acquired by performing image differential processing of image data that is inputted with a camera etc. The image differential processing acquires vertical differential image data and horizontal differential image data. The intensity of a differential value in each pixel is calculated based on the two differential image data and simultaneous lythe inclination direction of a differential point is calculated. An image that is maximum to a neighborhood point is defined as an edge maximum point in image data that shows differential intensity. A point that has a differential value which is larger than threshold which is preliminarily specified among edge maximum points acquired in such a way is made an edge point and a set of those edge points is an edge image. The inclination direction of edge points in an edge image is acquired from image data that show the inclination direction of differential points and produces an edge image that has inclination direction components.

Wendt discloses a watermark resistant to resizing and rotation. The Abstract of Wendt discloses:

> A hidden watermark and methods of detecting and embedding such watermark is provided. The watermark is resistant to efforts to avoid the message thereof.

Pages 4 to 5 of the Office Action stated:

> It would have been obvious to ordinary skill in the art at the time when the invention was made to use Masaaki's based on a distance from a reference position to a shortest point in a straight line passing through a point in the image and an angle between a straight line passing though the reference position and the shortest point and a reference axis including the reference position in Hiroyuki's an image matching method for performing a matching images to linear components in a first image and a second image because it will allow to reduce computer storage capacity also to shorten computer processing and to reduce the effect of noise by calculating an edge point that is equal or more than threshold from the intensity of a differential value of an edge point *[Masaaki's, see abstract, lines 1-3]*.

Applicant respectfully disagrees and submits that even if properly combined, unlike the method of Claim 1, neither Hiroyuki, Masaaki or Wendt individually, nor the method resulting from a combination of Hiroyuki, Masaaki and Wendt disclose, "causing a processor to execute the instructions to perform position correction processing to a first image and a second image, the first image including: (a) first points; and (b) first linear components, the second image including: (a) second points; and (b) second linear components; after performing the position correction processing, causing the processor to execute the instructions to transform: (a) the first

points of the first image and the second points of the second image to a curved pattern; and (b) the first linear components of the first image and the second linear components of the second image to a plurality of overlapped curved-patterns, said transformation being based on a distance from a reference position to a shortest point in a straight line passing through a point in the image and an angle between a straight line passing though the reference position and the shortest point and a reference axis including the reference position."

Specifically, page 3 of the Office Action stated that Hiroyuki discloses:

> a position correction step, performed by a position correction means, of performing a position correction processing to the first image and the second image *(see paragraph [0001], compare both images based on this result computed result and paragraph [[0042]-[0045] compute correlation, to compute correlation a position correction means is required).*
>
> a first step, performed after the position correction step and by a transformation means, of performing an image processing for transforming points in each image of the first image and the second image to a curved pattern and the linear components in each image to a plurality of overlapped curved-patterns *(see paragraph [0001], compare both images based on this result computed result and paragraph [0010] performing hough transformation with matching reference logarithmic coordinate and matching reference logarithmic coordinate referred to with overlapped curved pattern)*

In view thereof, as best understood by the Applicant, it appears that the Office Action interprets:

(a) the "figure used as a standard" of Hiroyuki as the first image of the method of Claim 1;

(b) the "inputted image" of Hiroyuki as the second image of the method of Claim 1; and

(c) the detection of the correlation coefficient of Hiroyuki (see Hiroyuki, paragraph [0043]), as the position correction processing of the method of Claim 1.

Applicant submits that the "figure used as a standard" of Hiroyuki does not include first points and first linear components. On the other hand, the method of Claim 1 includes, among other elements, a first image including first points and first linear components. Similarly, Applicant submits that the "inputted image" of Hiroyuki (interpreted as the second image of Claim 1) does not include second points and second linear components. On the other hand, the

second image of the method of Claim 1 includes, among other elements, a second image including second points and second linear components.

Assuming arguendo, that Hiroyuki does disclose the first and second images of Claim 1, unlike the method of Claim 1, neither Hiroyuki, Masaaki or Wendt disclose transforming: (a) the first points of the first image and the second points of the second image to a curved pattern; and (b) the first linear components of the first image and the second linear components of the second image to a plurality of overlapped curved-patterns.

Moreover, assuming arguendo, that Hiroyuki does disclose the transformation of Claim 1, neither Hiroyuki, Masaaki or Wendt disclose causing the processor to execute the instructions for such a transformation after performing the position correction processing (interpreted as the detection of the correlation coefficient of Hiroyuki). On the other hand, the method of Claim 1 includes, among other elements, "after performing the position correction processing, causing the processor to execute the instructions to transform: (a) the first points of the first image and the second points of the second image to a curved pattern; and (b) the first linear components of the first image and the second linear components of the second image to a plurality of overlapped curved-patterns."

For at least these reasons, it is respectfully submitted that independent Claim 1 is patentably distinguished over Hiroyuki, Masaaki and Wendt and in condition for allowance. Dependent Claims 2 to 7 and 9 to 11 depend either directly or indirectly from amended independent Claim 1 and are also allowable for the reasons given with respect to Claim 1 and because of the additional features recited in these claims.

Independent Claims 13 and 25 each include certain similar elements to independent Claim 1. For reasons similar to those discussed above with respect to independent Claim 1, independent Claims 13 and 25 (and dependent Claims 14 to 19, 21 to 23, 26 to 31 and 33 to 35) are each patentably distinguished over Hiroyuki, Masaaki and Wendt and in condition for allowance.

An earnest endeavor has been made to place this application in condition for formal allowance, and allowance is courteously solicited. If the Examiner has any questions regarding this Response, Applicant respectfully requests that the Examiner contact the undersigned.

Respectfully submitted,

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